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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/828,335	04/21/2004	Daniel Kilbank	63101.00019	5459

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TYSONS CORNER, VA 22182

EXAMINER

BLACK, LINH

ART UNIT	PAPER NUMBER
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2167

DATE MAILED: 09/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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## Office Action Summary

Application No.

10/828,335

Applicant(s)

KILBANK, DANIEL

Examiner

LINH BLACK

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 1-40 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

This communication is in response to the document dated 4/21/04. Claims 1-40 are pending in the application. Claims 1, 13, 20-24, 27, 38-40 are independent claims.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 4-5, 7-10, 28-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Dekel et al. (US 2003/0059096).

As per claim 1, Dekel et al. teach

A method for encoding information, the method comprising: identifying a first block of data – fig. 7, item 702; fig. 15; pars. 0174-0190.

accessing a database to search for the first block of data; producing a mapped second block of data if said first block of data is stored in said database; mapping said first block of data to said mapped second block of data – pars. 0031 (wherein if there is the original image stored in the database, it would be displayed on the screen as required

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by users or mapping from the original image to the screen image), 0170-0172 (distributed database where data may be subdivided into tiles, the subband tiles are further decomposed to subband data blocks), 0258-0262 (mapping function, original image/first blocks, and the approximated image/mapped second blocks), 0291 (identifying data block in the database – accessing database).

As per claim 2, Dekel et al. teach adding said first block of data to said database if said first block of data is not stored in said database – par. 0248.

As per claims 4, 5, 7 Dekel et al. teach compressing the first block of data; wherein said compressing comprises using a compression algorithm; lossless mapping of said first block of data – pars. 0014, 0255, 0372.

As per claim 8, Dekel et al. teach filtering said mapped second block of data – pars. 0292, 0334, 0337.

As per claim 9, Dekel et al. teach storing said mapped second block of data in said database – pars. 0309,

As per claim 10, Dekel et al. teach

sending mapped second block of data – pars. 0048, 0248.

As per claims 28-29, Dekel et al. teach variable length encoding and method – pars. 0370, 0385-0391, 0394.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dekel et al. (US 2003/0059096), and further in view of Chowdhary et al. (US 2004/0044582).

As per claim 3, Dekel et al. do not explicitly disclose cataloging said mapping step in the database. However, Chowdhary et al. teach electronic catalogue – the title; the step of mapping relationships are stored in catalogs – pars. 0036-0041; mapping steps, catalog, may be stored in database table – par. 0042. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Dekel et al. with Chowdhary et al.'s teaching to efficiently and timely locating of data for retrieval.

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Claims 6 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dekel et al. (US 2003/0059096), and further in view of Calabro et al. (US 2004/0179622).

As per claims 6 and 11, Dekel et al. teach mapping blocks of data using a quantum representation. However, Calabro et al. teach quantum algorithms – par. 0001; encoder, decoder, quantum block and map table, entanglement operation – fig. 1, pars. 0148, 0153-0155. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Dekel et al. with Chowdhary et al.'s teaching to take advantages of the useful performing of quantum entanglement searching processes.

As per claim 12, Dekel et al. do not teach wherein mapped second block of data includes a bit having quantum states, and wherein said quantum states represent said first block of data. However, Calabro et al. teach quantum state – pars. 0003-0007; bits of quantum states – pars. 0117, 0121-0123; wherein the input of the quantum algorithm is box 1: the unitary matrix block – par. 0008.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dekel et al. (US 2003/0059096), Calabro et al. (US 2004/0179622), and further in view of Chowdhary et al. (US 2004/0044582).

As per claim 13, Dekel et al. teach compression of data blocks – pars. 0048, 0269; encoding data block – pars. 0235-0237; transmitting of data blocks – par. 0253, 0271.

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Calabro et al. further improve Dekel et al.'s encoding method by teach an encoder – par. 0013; used to map strings of data – col. 0014-0026; quantum algorithms and numbers – pars. 0008-0014, 0117; quantum algorithms are used for control processes or process data in the database – par. 0002. However, Calabro et al. do not explicitly disclose cataloging said mapping step in the database. However, Chowdhary et al. teach electronic catalogue – the title; the step of mapping relationships are stored in catalogs – pars. 0036-0041; mapping steps, catalog, may be stored in database table – par. 0042; hub to transfer information – par. 0174. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Dekel et al.'s, Calabro et al.'s with Chowdhary et al.'s teaching take advantages of the useful performing of quantum entanglement searching processes, and to catalog the mapping information in the database to efficiently and timely locating of data for retrieval.

As per claim 14, Dekel et al. teach an input to receive said information – pars. 0330, 0338.

As per claim 15, Dekel et al. teach streams of data – par. 0014; encoded streams – par. 0291.

As per claim 16, Dekel et al. teach comprising an identification node to identify a type of said block of information – pars. 0287, 0339.

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As per claim 17, Dekel et al. teach transmitting of data – pars. 0043, 0253.

As per claim 19, Dekel et al. teach wherein said encoder receives the encoded block from the database, and applies the encoded block to the block of information – pars. 0289-0291.

As per claim 20, Dekel et al. teach an identifier to receive a block of information; a database to store an encoded block of data and to provide the encoded block of information upon receipt of said block of information – pars. 0170-0174, 0289-0291, 0309.

As per claim 21, Dekel et al. teach receiving a block of data; encoding said block of data by accessing a database and selecting an encoded block of data - pars. 0170-0174, 0289-0291, 0309.

updating said database with a mapping function for said encoding step – par. 0309.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dekel et al. (US 2003/0059096), Calabro et al. (US 2004/0179622), Chowdhary et al. (US 2004/0044582), and further in view of Beesley et al. (US 6574553).

As per claim 13, Dekel, Calabro, and Chowdhary et al. do not explicitly disclose wherein said transmitter comprises an antenna. However, it is well known in the art that transmitter may contain an antenna. Beesley et al. teach cartographic data blocks – fig.



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5; col. 7, lines 25-47; "the antenna 36 is connected to the processor 52 via a cellular transmitter/receiver 37 and a GPS receiver 35" – col. 6, lines 14-27. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Dekel et al.'s, Calabro et al.'s, Chowdhary et al.'s teachings with Beesley et al.'s teaching to provide the efficiency of transmitting data to users.

Claims 22-27, 30-40 claim the same subject matter as of claims 1-21, and 28-29 and thus, are rejected on the same ground of rejection as of claims 1-21, and 28-29.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LINH BLACK whose telephone number is 571-272-4106. The examiner can normally be reached on 8am - 5pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN BREENE can be reached on 571-272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LINH BLACK  
Examiner  
Art Unit 2167

September 2, 2005



Julie S. Heston  
Primary Examiner  
Art Unit 2167